

# Message from the President

Fostering engineers for the next generation who will work globally as well as locally to make society and the world sustainable.

The National Institute of Technology (KOSEN), Fukushima College (Fukushima KOSEN) was founded in April 1962 as one of the first institutes of technology in Japan. In 1994, the business program was added in order to extend the scope of Kosen's educational curriculum.

In addition, the Advanced Course was established in April 2004. The educational doctrine of Fukushima KOSEN is as follows:

- Cultivating students with broad and deep humanity
- Raising fundamental scientific knowledge, creativity and practical capacity
- Developing the students' talents, expanding their global horizons, and raising their communication abilities

Based on this doctrine, we are making great strides to enhance the academic and research levels of Fukushima KOSEN. Fostering engineers for the next generation, who can develop a sustainable society and play an active role in the local community as global citizens, is the mission that guides all activities at Fukushima KOSEN. We believe that these efforts can contribute to the development of Iwaki, Fukushima, and Japan.

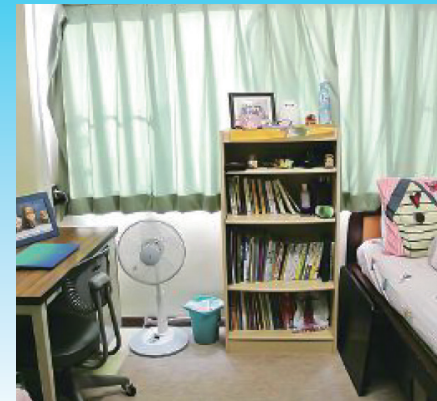
President Osamu Yamashita



# Dormitory

## Events

- Welcome party
- Evacuation drill
- Lunch party etc.

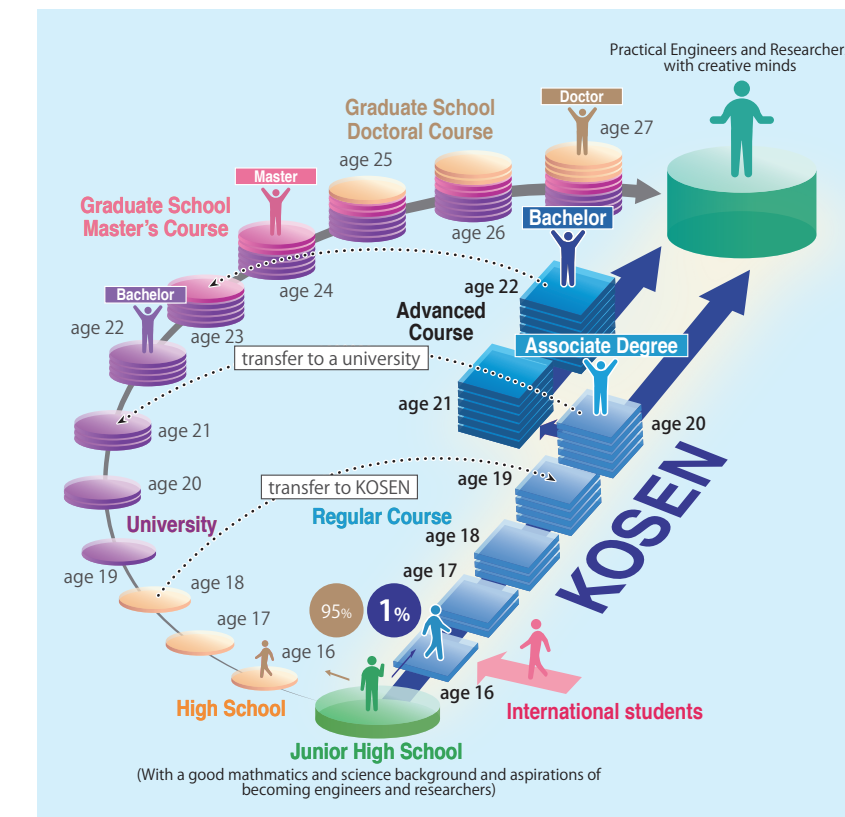


# "KOSEN" System

The "Kosen" system is a five-year program that combines three years of high school and two years of an undergraduate university degree program.

At the end of the five years, students can continue at Kosen for another two years and finish their university degree; transfer to another university for the final two years of their degree; or enter the workforce.

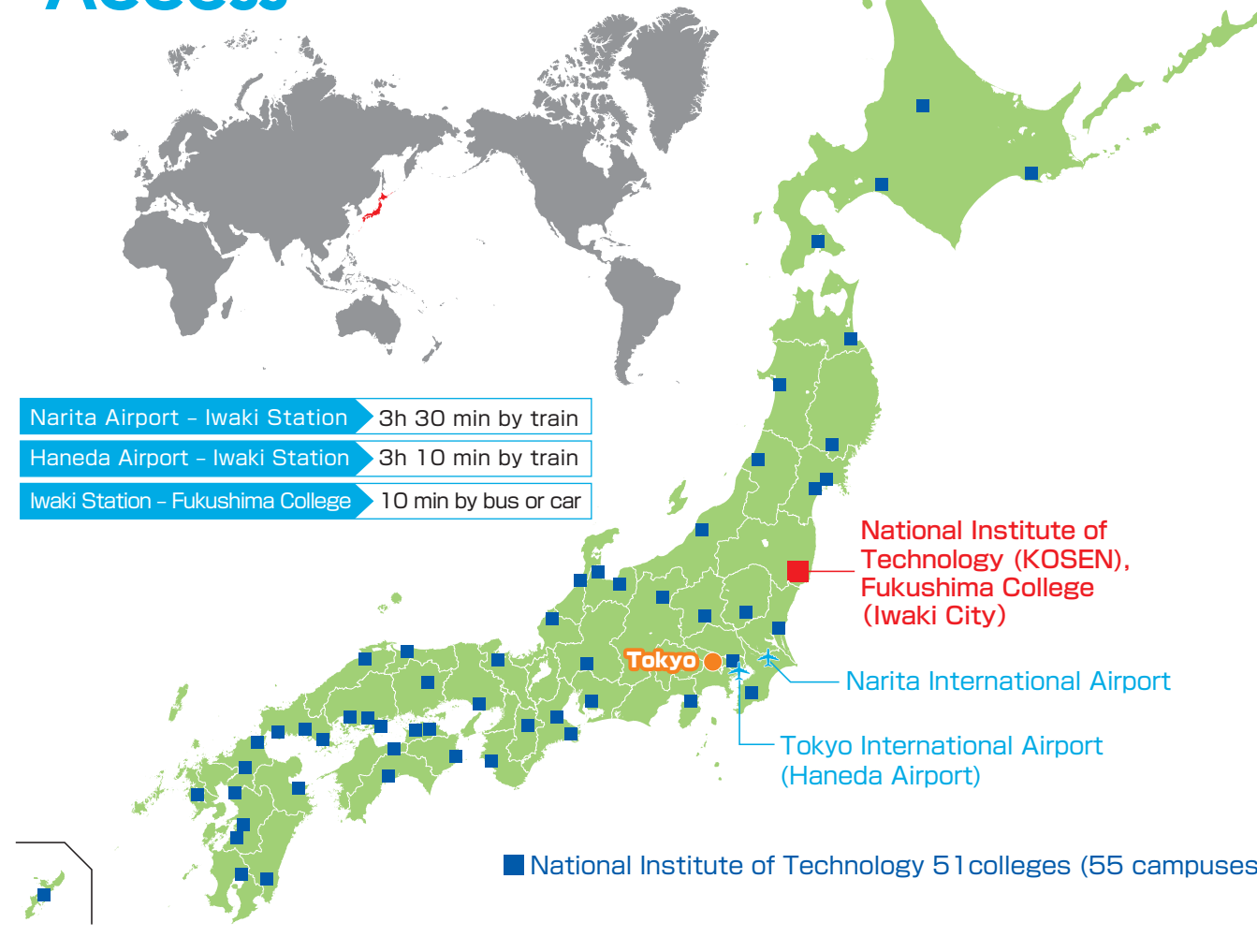
Kosen was established in 1961 in response to a strong demand from the industrial sector to foster engineers who could help sustain the high Japanese economic growth which was occurring at the time.



# Characteristics of "KOSEN" Education

- We follow a curriculum centered on liberal arts and professional studies
- We have a highly qualified academic staff (more than 80% of specialized subject lecturers have doctoral degree)
- We provide experimental and practical training, internships and coop education
- We offer international exchange opportunities
- We offer student dormitories and extracurricular activities
- We hold Robot, Programming, Design and Speech contests
- We organize an annual all-KOSEN Athletics Competition
- We help students to find various career paths
- We produce engineers with extensive practical creativity

# Access



# National Institute of Technology (KOSEN), Fukushima College

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# National Institute of Technology (KOSEN), Fukushima College




# General Education

The General Education Course helps students to acquire the fundamental knowledge and skills they need to become well-qualified in their specialized majors.

- Basic mathematics
- Linear algebra
- Differential and integral calculus
- Physics
- Chemistry
- English
- Japanese
- Humanities and social sciences
- Physical education
- Fine arts

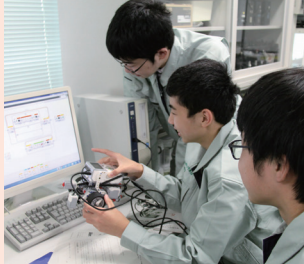


## Programs




### Mechanical System Engineering

- Mechanical design and drawing
- Mechanism
- Mechanical dynamics
- Strength materials
- Thermodynamics
- Hydraulics
- Fundamental manufacturing practice
- Manufacturing practice
- Creative manufacturing practice



### Electrical and Electronic System Engineering

- Electric circuits
- Electric and electronic measurement
- Electrical communications
- Electromagnetics
- Power electronics
- Information engineering
- Experiments on electric and electronic engineering
- Creative manufacturing practice



### Applied Chemistry and Biochemistry

- Physical chemistry
- Organic chemistry
- Inorganic chemistry
- Analytical chemistry
- Biochemistry
- Chemical engineering
- Experiment of material engineering
- Experiment of material chemistry
- Experiment of biotechnology



### Civil and Environmental Engineering

- Construction materials
- Environmental science
- Geotechnical engineering
- Hydraulics
- Method of construction
- Regional planning
- Structural mechanics
- Design exercises for civil engineering
- Experiments and exercises in civil engineering
- Survey training

## Programs



### Business Communication

- Basic programming
- Business English practice
- Financial accounting
- Intercultural communication
- International management
- International economics
- Linear algebra

## Advanced Course

Industrial Technology System Engineering

### Production and Information System Engineering

- Applied mechatronics
- Applied electronically control engineering
- Experiments of production and information system engineering

### Research projects

- Development and application of expanded MCF rubber
- Robotics for nuclear decommission
- Analysis of the squeaking sand in Iwaki seashore based on image processing
- Analysis of X-ray CT images for chest disease diagnosis

### Energy System Engineering

- Renewable power generation
- Power delivery system engineering
- Experiments of energy system engineering

### Research projects

- A research of the control method of storage battery use of the real scale smart-grid experimental system
- Study of solar tracking photovoltaic power generating system for a state of emergency
- Study on contact-free type high efficiency disk drive by using diamagnetic graphite

### Chemistry and Bioengineering

- Physical chemistry for industrial processing
- Applied material chemistry
- Practical organic chemistry
- Biomolecular functional engineering
- Advanced engineering experiments in chemistry and biochemistry

### Research projects

- Chemical synthesis of advanced functional materials
- Fundamental and applied bioengineering
- Advanced material fabrication/processing
- Instrument technology related to chemical industries

### Social Environmental System Engineering

- Analysis of structures
- Disaster prevention engineering
- Environmental preservation engineering
- Infrastructure maintenance engineering
- Advanced engineering experiments

### Research projects

- High-temperature characteristic of concrete
- Change and the actual situation of the city and its area, focusing on the social and space structure
- Maintenance management of civil infrastructures
- Numerical analysis of solid particle transport in the natural world

## Advanced Course

### Business Communicology

- Business practice
- Exercise for system design
- Financial statements analysis
- Foundation of database systems
- Global management
- Industrial economics
- New business development




### Research projects

- Case study of sake tourism in Fukushima
- Development of IoT safety confirmation system for senior users
- Comparative awareness survey of nuclear energy utilization




# Overseas students

Interview to our overseas students




### 1 Briefly describe your life at NIT Fukushima(Fukushima Kosen).

-  Two years ago, I came to Fukushima. Now, I'm a fifth-grade student in the Civil Engineering Department at Fukushima Kosen. Life at Kosen is very interesting, and I am studying a lot of different things here. I have a lot of support from the teachers and tutors, and my Japanese friends.
-  I am from Indonesia, and now I am in the third year of Mechanical System Engineering Department in Fukushima Kosen. And here, to be able to learn a lot of different things and actually live the life of the Japanese student generally has been really fun for me. I got a lot of support in what I am doing and what I am going to do from my tutors, teachers and my Japanese friends. They are so kind and friendly in teaching me and telling me things even sometimes there are language barriers. Living has been so convenient that I can take my mind off of it and just focus on my study here.
-  I am a 4th year student of Mechanical System Engineering Department. As a foreign student, life in a foreign country is always interesting as you are meeting new people and experiencing new things everyday. The food in Japan is especially exciting for me.

### 2 What was the most impressive experience you had in Japan?

-  In August, I went to a fireworks festival with my senpai. The fireworks matched the rhythm of the music. It was awesome! I got to wear a beautiful yukata for the first time during the festival. That had been my favorite experience during my time in Japan.
-  I've been in Japan for a year so I guess I've been experiencing quite a lot. But the best is just the summer festival, the stall food is delicious, and 'the Bon Odori' is so fun. I've been only able to see those things on tv but now to be able to experienced it directly is just amazing.
-  One of the notable moments of my stay here in Japan has been the discovery of Japanese food. Before I came to Japan I hadn't been aware of anything other than ramen and sushi. It was a pleasant surprise to discover how healthy and tasty can describe the same food.

### 3 Do you have any messages for the incoming overseas students?

-  Fukushima Kosen's teachers and students are very polite. They always help you. If you try it for yourself, you can gain a lot of knowledge at Fukushima Kosen.
-  When you are here in Fukushima Kosen, try to find something to do. It will make a good experience. I guess study is a main purpose here, but it will be a waste not to enjoy living here. So try to find your things to do here and make a good memory.
-  If you are looking to study internationally, I would say good luck to you. As it can be a hard but rewarding challenge.



2018	Mongolia(2 students)
2019	Mongolia(1 student)
2020	Indonesia (1 student) Malaysia (2 students)

# Visiting overseas students

Collaborative research projects between the exchange students and Kosen students

- ### Projects
- Micro structural aspects of damage in cured cementitious materials induced by exposure to elevated temperature
  - A non-tumbling robot by using a differential gear
  - Development of Cooperation Robots
  - The market of the manga in France and in Japan
  - Sightseeing spots in Iwaki City & Fukushima

2018	Institut Universitaire de technologie (IUT) in France (4 students) Turku University of Applied Sciences (TUAS) in Finland (2 students)
2019	IUT (3 students) TUAS (2 students)
2020	IUT (1 student) Due to COVID-19, the acceptance of students from IUT (4 students) and TUAS (1 student) was cancelled.

